

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

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## LARGE MINING OPERATIONS 2007 PROGRESS REPORT January 1, 2007 to December 31, 2007

The information required in this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, and the rules as under the Utah Minerals Regulatory Program.

1.	Mine Permit Number: M/023/003
2.	Mine Name:Topaz Mining Property
3.	Name of Operator/Permittee: Brush Resources Inc.
	Note: If Operator's address, company representative or phone number have changed, please provide a replacement page to the Notice of Intention.
4.	Mine Location: approx. 50 miles NW of Delta, Utah in Juab County
5.	Report the gross amount of ore mined and waste moved, as well as the arrangement, positioning, or distribution of the material:
	Gross Ore Mined 1,800 wet Tons, or yd3  Waste Material Moved Tons or 1.55 million bank yd3  New Disturbance 9.7 Acres during 2007  Area Reclaimed 32.2 Acres during 2007  Total Disturbed Area 139.0 Acres*  Was the ore shipped off site? If not, where is the ore located? Ore is both shipped to the mill & stockpiled on designated pads at the mine site
	Where is the waste located? The waste is backfill of the Roadside 2 & Roadside Fluro 3 open pits
	*Total life of mine disturbance to the end of 2007.
6.	Briefly describe the reclamation work performed during the past year. A map showing reclaimed areas and dates is suggested. (Submit form MR-SITE for an application for full or partial bond/site release).  Fluro Phase 1, LMUs #1, #2 & #3 backfill top surface was reclaimed as prescribed in the approved plan. Please see attached supplement for details.
7.	Include an updated map depicting surface disturbance and reclamation performed during the year, prepared in accordance with Rule R647-4-105.
	reby certify, under penalties of law, the information provided in this report is true and e best of my knowledge and belief.
	Name (Typed or Print): Alex Boulton
	Title of Operator: President, Brush Resources Inc.
	Signature of Operator: Clex Bosch
	Date: 2/19/08
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A Brush Engineered Materials Inc. Company

Brush Resources Inc. P.O Box 815 Delta, Utah 84624 Tel: 435-864-2701 Fax: 435-864-4004

### SUPPLEMENT TO FORM MR-AR-LMO

TO:

TOM MUNSON

FROM:

JOHN WAGNER

**SUBJECT:** TOPAZ MINE - FLURO PHASE 1 RECLAMATION

DATE:

**FEBRUARY 4, 2008** 

CC:

ALEX BOULTON; RECLAMATION 2007 FILE

The following notes outline the work done to reclaim the Fluro Phase 1. Logical Mining Units #1, #2 and #3, backfill top surface. Relevant information is taken from the approved Mining Reclamation Plan (December 2006). Please see the Plan section references as needed during the review of this document. Plates 6A, 6B and 10 from the plan are a good visual reference. Also, note that all three Fluro LMUs were opened simultaneously due to economic considerations (see MRP 5.9).

Work completed consisted of:

### 1. Topsoil sampling, mapping, and stockpiling.

- a. Topsoil recovery was based on field observations and analytical results. (see MRP
- The "new" topsoil was stockpiled alongside the "old" topsoil remaining from the Roadside/Fluro III project (circa 1991-92). A total of 6,275 cubic yards was available for redistribution on the backfill surface area (see attached "Soil Stockpile Map"). This compares with the project demand for topsoil of 4,947 cubic yards for the Fluro Phase I LMUs (MRP Table 7.10-1).

### 2. Backfill top contouring with rock piles intended for wildlife habitat.

- a. The surface of the dump top was very rough due to the construction methods, as well as the large unit size and lack of fines in the blasted rhyolite. The area was contoured with a dozer and the larger rocks were arranged in random piles in order to provide wildlife habitat.
- b. The backfill top area was estimated at 12.2 acres in the plan (see MRP Table 7.10-1). The as-built area that was reclaimed is estimated at 14.2 acres. The additional reclaimed acreage is north of the planned area where the Fluro Phase 1 backfill was blended into the Roadside/Fluro 3 backfill margin (see attached illustration subtitled "As-Built Features"). This was a voluntary enhancement to the reclamation of the overall area.
- The southeast corner of the backfill top contains a one and one-half acre tuff disposal site. The disposal site is located adjacent to the Roadside/Fluro 3 pit footwall slope, which is comprised of tuff, resulting in the return of the tuff overburden to the same general geologic setting from which it was mined. This area was not capped with rhyolite and will not receive any treatments during Phase 1 reclamation as it will be used for access in future backfilling operations.
- 3. Backfill top partially covered with gravel mulch.

a. This was necessary to provide a suitable surface for maneuvering the scrapers during topsoil redistribution, due to the conditions described in 2.a. above.

b. This serves as a good base for the topsoil, preventing excess soil losses among the large rock fraction and loose nature of the surface area (see MRP Table 7.11-2).

### 4. Backfill top perimeter rounded.

- The rounding is a standard reclamation treatment intended to blend the dump crest to the surrounding terrain and reduce erosion (see MRP section 7.4.2 and attached schematic).
- b. The Plan estimated 989 linear feet of rounding for the three Fluro LMUs (see Appendix 8, section 9.4 of the MRP). The actual length of rounded perimeter was approximately 1,600 feet. There was an omission of a measured portion of the margin during the surety calculations for this area. Please note that the entire perimeter length was rounded.

### 5. Survey the backfill top details.

- a. This survey defined the areas mulched and not mulched, thereby allowing a comparison of future vegetation success over time.
- b. After the topsoil redistribution, the segregated areas were delineated (see 6.D. below).

### 6. Distribute available topsoil on the backfill surface.

- a. The "new" topsoil stockpiles contain 2,515 cubic yards. This is twelve percent less topsoil than was estimated in the plan (see Table 5.6-1 of the MRP).
- b. The "old" topsoil stockpile contains 3,760 cubic yards. This is more than six times the volume estimated in the plan (see 7.9 of the MRP).
- c. The two stockpiles provided a total of 6,275 cubic yards. All of the stockpiled topsoil was placed in a three to six inch cap, more or less, over the backfill surface. The increased backfill surface area (see 2.b. above) resulted in greater topsoil demand than that estimated in the MRP (Table 7.10-1). In addition, the roughened backfill surface required an application thickness greater than the three-inch minimum used for estimating demand in the MRP. As a result, no topsoil was available for the backfill outslope
- d. The backfill top was bisected into two areas, with the "old" topsoil and the "new" topsoil segregated (see attached illustration subtitled "As-Built Features"). This will allow for a comparison of relative vegetative success over time.
- e. The topsoil storage and handling area was graded to original contours and "shallow ripped" in preparation for reseeding (see MRP 7.4.3).

### 7. Deep ripping of the backfill top not necessary.

- a. The "plug dumping" and dozer spreading construction method provided a loose surface that is deeper than the eighteen inch rip depth specified in the plan (see MRP 7.8).
- b. A "shallow rip" or scarifying of approximately six inches was done in the areas where the topsoil overlays the gravel mulch. This mixed the topsoil and mulch and is expected to improve the overall seedbed.

### 8. No manure or artificial amendments applied.

- Gravel mulch-amended topsoil covers the majority of the backfill surface and will be the designated amendment for this project (see 7.11 of the MRP).
- Topsoil analysis indicates that salinity is not a problem. Therefore, an application of gypsum is not needed.
- Composted manure is stockpiled adjacent to the Rainbow Phase 1 dump area(s) and will be used selectively when that project is developed.
- d. Use of chemical fertilizers (e.g. Mono-ammonium Phosphate) may attract invasive plant species (e.g. cheat grass) and was therefore not used.

### 9. Apply reclamation seed mix.

- a. The seed mix approved in the plan (see Table 7.11-1 of the MRP) was applied by airplane. Weather conditions during the application were good, with only light winds (3-5 mph).
- b. Seed was ordered well in advance to insure availability. The as-built area required 150.5 pounds of seed mix to comply with the plan. An extra twenty percent was added to the order to insure good coverage and germination on both the backfill surface and the topsoil storage site.
- c. No seed was applied to the backfill outslope except for the area between the backfill surface and topsoil storage site (see attached illustration subtitled "As-Built Features").

### 10. Tromp the backfill top and topsoil storage areas with the sheepsfoot implement.

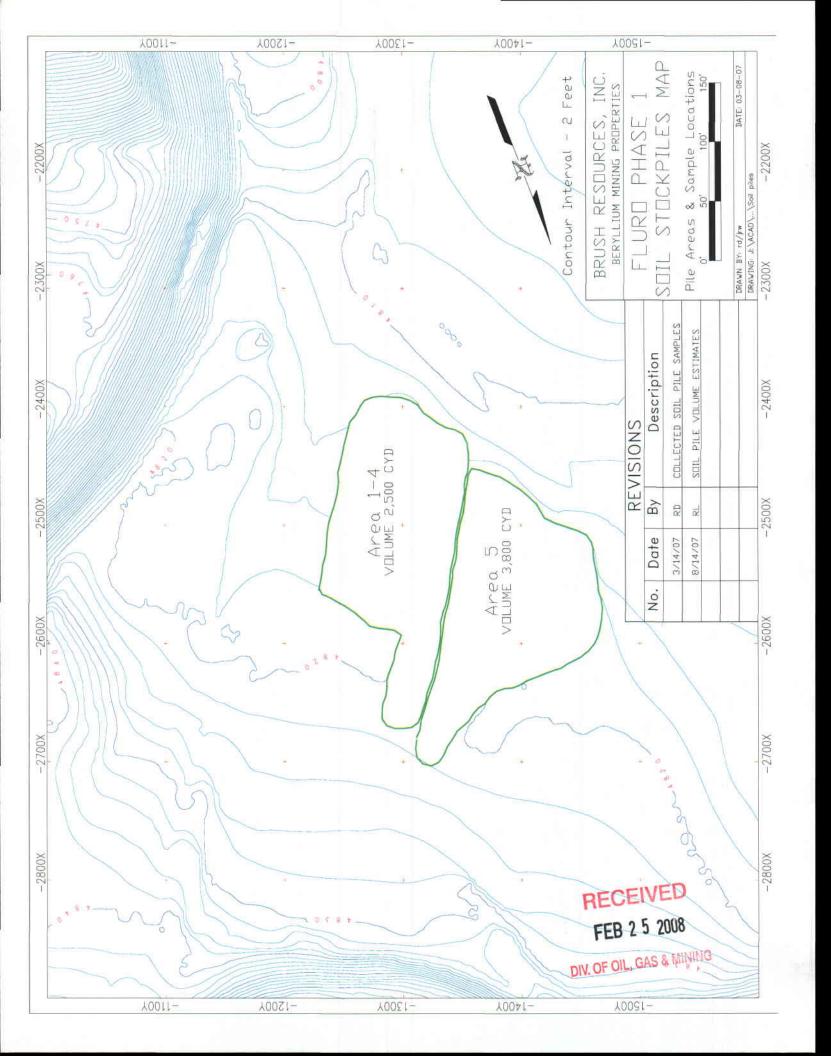
a. The sheepsfoot is a standard treatment intended to press the seed into the soil and create depressions to collect water and provide shelter for seedlings (see 7.6.3).

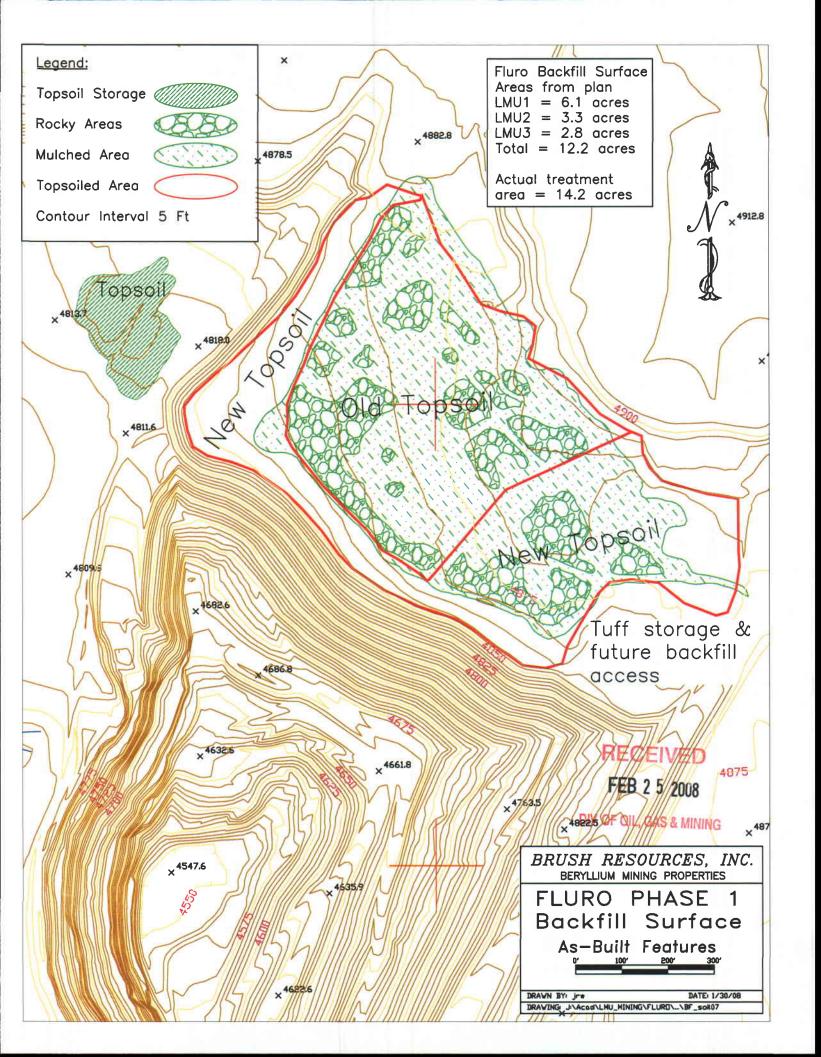
The work on numbers 5-10 above was completed during the late fall and early winter in compliance with the plan (see 7.11 of the MRP). The topsoil work was conducted in the second half of December and the seed mix application was done in the second half of January. The aerial broadcast was timed to take advantage of a mild thaw of the ground and a thin snow covering. The plant species in the seed mix should have an adequate dormancy and freezing period for germination.

All considerations and tasks are in compliance with the plan. Therefore, the Division of Oil, Gas and Mining did not need advance notification.

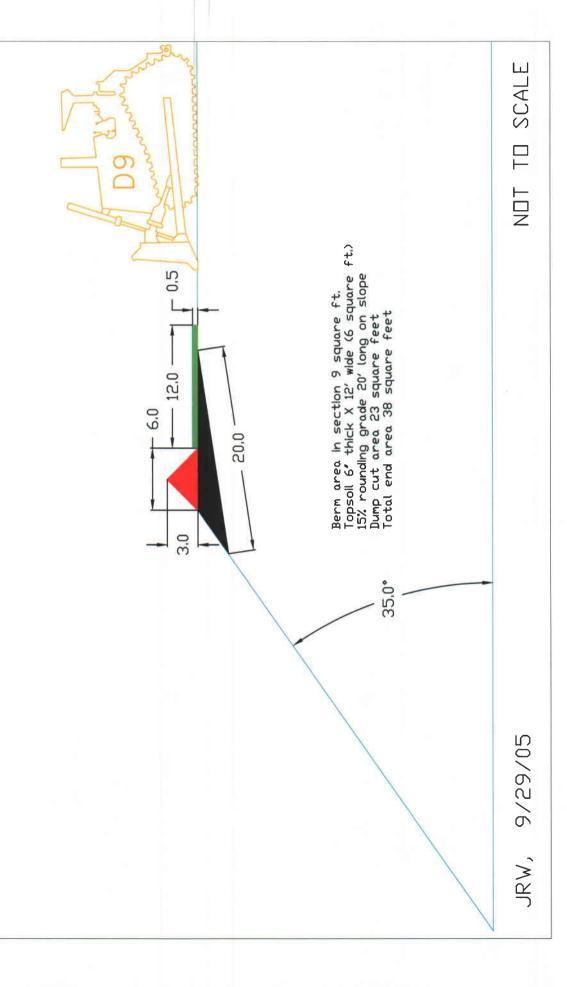
### Attachments:

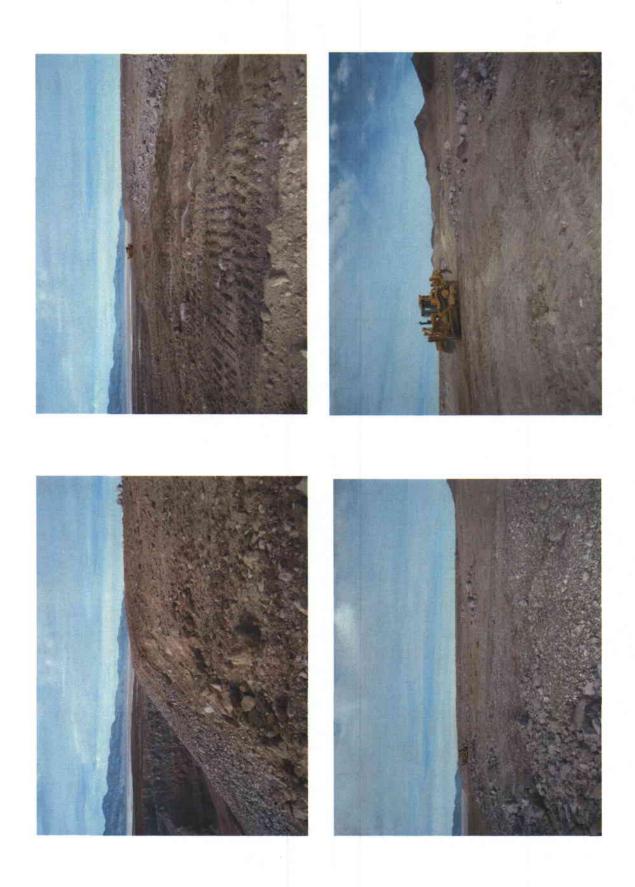
- "Soil Stockpiles Map"
- Map of "As-Built Features"
- "Dump Top Rounding Schematic"
- Photos of reclamation work





# Dump Top Rounding Schematic Brush Resources Inc.

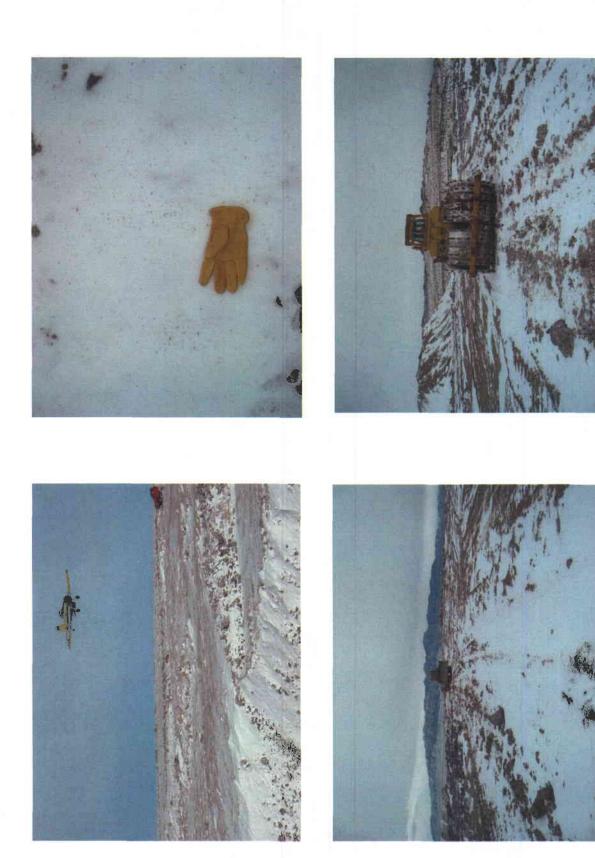




Fluro Phase 1 backfill top surface - perimeter rounding & topsoil distribution



Fluro Phase 1 backfill top surface - topsoil handling & spreading; aerial broadcast seed



Fluro Phase 1 backfill top surface - aerial broadcast seed; sheepsfoot treatment